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FISHERY MARKET NEWS

MARCH 1940

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UNITED STATES DEPARTMENT OF THE INTERIOR
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UNITED STATES
DEPARTMENT OF THE INTERIOR
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March 1940 Washington, D. C. Vol. 2, No. 3

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The Common eel.--Imaginary convictions of the public regarding the eel has handicapped the logical development of the American eel fisheries.

New York fisheries, 1939.--The yield of the commercial fisheries of New York State during 1939 did not differ materially from that of the previous year.

Texas and Louisiana fisheries, 1939.--Restrictive marketing conditions and scarcity of fish characterized the operation of Texas fisheries while Louisiana experienced satisfactory oyster and shrimp activities during 1939.

Fresh Fish

Vessel landings of fresh fish at Boston, Gloucester, and Portland in January totaled almost 25 million pounds, worth over $800,000 to the fishermen. Haddock led the items landed, with cod, rosefish, flounders, and pollock also contributing materially to the landings.

Prices received by the fishermen for landings at the Boston Fish Pier averaged 3.58 cents in January, reflecting an important increase over the averages of other recent months.

There were 21 million pounds of fresh fish sold on the Boston Fish Pier in January. Four million pounds of fresh- and salt-water fishery products were received in Chicago during the month.

Frozen Fish

Total United States and Alaska frozen fish holdings on February 15 amounted to 62 1/3 million pounds. Market News reports tending to indicate distribution of these stocks showed 7,800,000 pounds on hand in Boston on February 28; 7,000,000 pounds on hand in New York City on February 29; and 4,200,000 pounds held in Chicago on February 29. About 7,000,000 pounds of fresh fishery products were frozen in domestic cold-storage plants during the month ending February 15.

Canned Fish

Unsold canned salmon in the hands of packers on February 29 totaled 1,490,000 standard cases, a decrease of 120,000 cases since January 31, and 27 percent less than the number held on February 28, 1939.

Shrimp canning activity reached virtual cessation in February; the pack of California sardines in January added 571,000 cases to a pack eclipsing that of the 1938-39 season; the January tuna pack amounted to 186,000 cases; and mackerel canned in California in January totaled 189,000 cases, an increase of 41 percent over January 1939 figures.

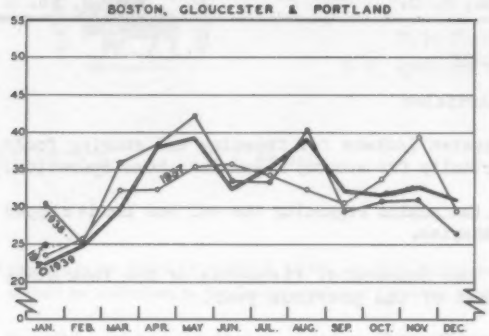
Foreign Trade

The combined volume of imports and exports of edible fishery products was greater in January than in any month since October 1936. Exports increased 43 percent over the January 1939 figure and imports exceeded those of January 1939 by 5 percent. Imports totaled 38,836,000 pounds, while the total of products exported was 17,252,000 pounds. Imports of canned crab meat increased 603 percent over the figures for the first month in 1939.

TRENDS OF FISHERY TRADE

In millions of pounds

VESSEL LANDINGS, ALL FRESH FISH
BOSTON, GLOUCESTER & PORTLAND



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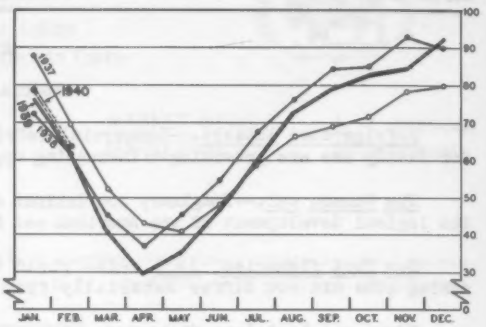
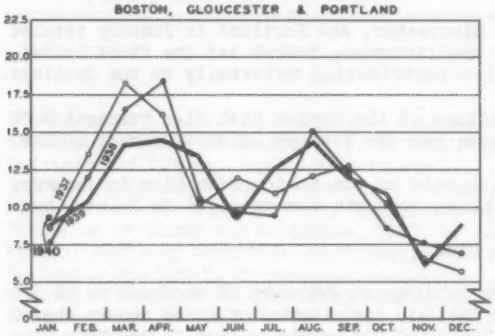
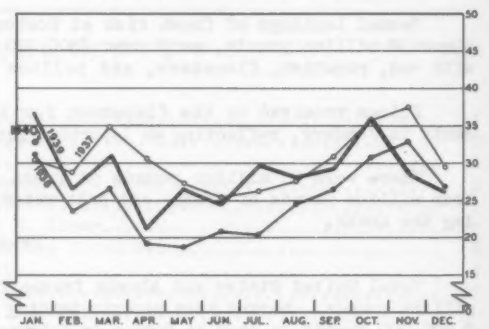


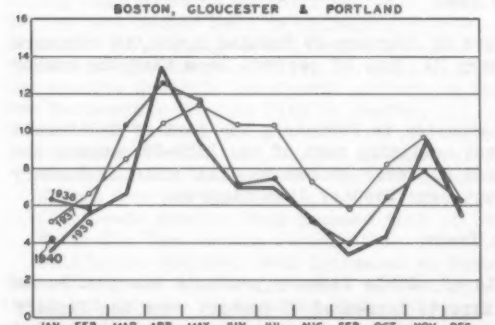
VESSEL LANDINGS, FRESH HADDOCK
BOSTON, GLOUCESTER & PORTLAND



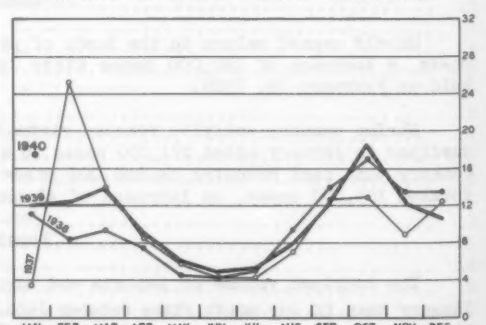
IMPORTS OF EDIBLE FISHERY COMMODITIES



VESSEL LANDINGS, FRESH COD
BOSTON, GLOUCESTER & PORTLAND



EXPORTS OF EDIBLE FISHERY COMMODITIES



REFRIGERATED LOCKERS

By R. W. Harrison, In Charge
Technological Laboratory
U. S. Bureau of Fisheries
Seattle, Washington

Until recently the frugal housewife depended largely upon home canning for preserving surplus foods, when in season and available at low prices, for future consumption by the family. In certain localities today, however, especially in the Midwest and on the Pacific coast, an increasing number of housewives are accomplishing the same result with less effort by preserving such surplus foods by freezing and storage in refrigerated lockers. On the farm the refrigerated locker is maintained as part of the farm equipment. In the city the housewife rents one or more lockers in a commercial refrigerated locker plant, often as conveniently located as the family grocery store. Lockers normally range from 8 to 12 cubic feet capacity and rent at a rate of 75 cents to $1.00 per cubic foot per year.

From the standpoint of age, the refrigerated locker business may be considered as still in its infancy, but it has been one of the fastest growing infants in recent times. According to current figures, there are somewhat over two thousand commercial locker plants in operation in the United States and the number of new installations is increasing steadily. A conservative estimate would indicate that at least a half million families are now storing foods, principally meats, fruits, and vegetables, in refrigerated lockers.

The freezing and storage facilities in refrigerated locker plants on the whole are excellent. In the Midwest, where the greater number of the installations are now in operation, practically all plants have sharp freezer rooms and the locker rooms are generally held at a temperature not over 10° F. In several of these States, laws have been passed which prohibit the erection of plants without sharp freezing facilities. On the Pacific coast, sharp freezer rooms are less prevalent but locker storage temperatures are lower, being generally very close to 0° F.

Considerable information has been published regarding the preservation of agricultural products in refrigerated lockers and locker operators are in a position to advise their customers as to the better methods of preparing these foods for freezing and storage, the types of fruits and vegetables which lend themselves best to such storage and their approximate storage life. Similar information has not been obtained for fishery products, and methods found successful in commercial fish freezing are not as generally suitable for home use as are those for the commercial handling of meats, fruits, and vegetables. Accordingly, if home prepared fishery products are to become an important item in the household storage locker, specific methods assuring a satisfactory resultant product must be made available to locker operators and their patrons. With this in mind, the Bureau has undertaken a study of the problem, the investigational work being carried on at the Seattle Technological Laboratory. Attention will be given to the species of marine and fresh-water fish and shellfish taken by sportsmen and commercial fishermen that are most likely to be available for storage in lockers in those parts of the country where lockers are most prevalent. In the test work consideration will be given to methods of preparation and packaging most suitable for use under refrigerated locker storage conditions, the relative keeping properties or storage life of the various species, and their tendency, if any, to impart a fishy flavor to other foods stored in the same locker compartment. This latter question is of great importance because if it can be demonstrated that fishery products can be held with other foods without imparting "off" flavors, the refrigerated locker development may easily become a most vital factor in the distribution of commercially frozen, packaged fishery products.

Since its inception, the frozen, packaged fish industry has been handicapped by the limitations of the facilities for both wholesale and retail distribution. Unless a city was large enough to maintain a general cold-storage warehouse, shipments of frozen, packaged fish could not be received in quantity and unless retail distributors could afford to maintain low temperature storage cabinets, the frozen product could not be made readily available to the consumer. The refrigerated locker development offers material relief from this situation. Each refrigerated locker plant is a potential cold-storage warehouse and its operator a potential wholesaler and retailer of frozen foods. Furthermore, the patron of

the refrigerated locker is frozen food conscious and is more likely to appreciate the opportunity of being able to purchase the high quality fishery products which can be made available to him. Also, since the patron possesses cold-storage facilities of his own, by virtue of his individual locker, he should be able to purchase frozen fish in quantity at a material saving. As an example, the writer cites the following price list for commercially frozen fruits and vegetables in effect in a Seattle refrigerated locker plant:

Product	Single pkg.	In lots of 6 pkgs.	
		6 pkgs.	Per pkg.
Sweet garden peas	$0.20	$0.81	$0.13½
Whole kernel corn	.20	.78	.13
Corn on the cob	.06 ea.	.60 doz.	.05 ea.
Fancy-cut green beans	.24	1.14	.19
Fancy green asparagus	.33	1.44	.24
Spinach, ready to cook	.17	.72	.12
Strawberries	.23	1.08	.18
Raspberries	.23	1.08	.18
Sliced yellow peaches	.22	1.02	.17
R.S.P. cherries	.19	.84	.14

Note.--One package serves 4 persons.

It will be observed that purchases of these commodities in lots of 6 packages results in a savings of from 18 to 35 percent in the unit cost as compared with buying in single packages. The above prices represent original retail commodity costs before storage in private lockers; thus, they do not include any charges for locker rental.

If the housewife has frozen fishery products in the family refrigerated locker, be they home prepared or of commercial origin, the psychology of suggestion and possession will lead to more frequent serving of fish than would otherwise be the case, particularly so when the product is of high quality.

All surveys of per capita fish consumption in the United States demonstrate the relatively limited consumption of fishery products in inland States. This has been attributed to the inability of the fishing industry to reach the consumer with a product comparable to that available in the coastal States where consumption is much greater. The refrigerated locker development offers a means for meeting this situation because the most pronounced growth has taken place in the inland States. This may be seen by the following summary compiled from data supplied by The Locker Patron, a periodical for the refrigerated locker customer.

States having more than 200 plants

Iowa, 405; Minnesota, 257

States having 100 to 200 plants

Wisconsin, 176; Nebraska, 156; Illinois, 154; Washington, 144; Kansas, 133

States having 50 to 100 plants

Oregon, 74; Ohio, 52; Texas, 50

States having less than 50 plants

South Dakota, 48; Indiana, 47; Pennsylvania, 33; North Dakota, 30; Oklahoma, 30; Michigan, 27; Missouri, 25; California, 25; Idaho, 24; Colorado, 23; Tennessee, 22; Montana, 19; Alabama, 16; Wyoming, 12; remaining States, less than 10 each.

If the fishing industry is alert to the opportunities arising from the refrigerated locker development, more people will be eating better fishery products and that means much more fish will be consumed.

THE COMMON EEL--A NEGLECTED AMERICAN FISHERY

By Edna N. Sater
U. S. Bureau of Fisheries
Washington, D. C.

Although considered a valuable food fish in the United States, the eel has never attained the economic importance of the fishery in western Europe. Denmark--the smallest coastwise country of Europe--has an eel catch which far surpasses that in all North America.

For 1937 (the latest year for which complete figures are available) the total catch of eels in the United States amounted to 1,320,000 pounds, for which the producers received $108,000.

This fishery is prosecuted mainly along the Atlantic coast; spread rather evenly through the New England, Middle Atlantic, and Chesapeake areas. In this region New Jersey leads with 272,400 pounds, valued at $26,307. Maryland ranks second with 191,300 pounds, valued at $16,068, followed by Rhode Island with 177,400 pounds at $14,330; New York with 172,400 pounds at $10,075; and Virginia with 125,500 pounds at $11,184. Massachusetts, Connecticut, Maine, and Delaware, in that order, complete the list of eastern States having eel-producing waters of commercial importance.

The capture of the eel does not require expensive apparatus and boats. Eel fishing could very well become a good part-time occupation, employing numbers of men.

Various methods are used in eel capture--haul seines, spears, hand lines, fyke nets, pound nets, and otter trawls. However, the method most generally employed is the eel pot--an inexpensive small trap to which the eel is attracted by bait of stale fish. Hard and king crabs, shrimp, menhaden, and soft clams also are used for bait. Being very greedy, any bait will do.

The great majority of fishermen make their own pots, either of splints or wire. The length of a pot ranges from 18 inches to 3 feet. The splint pots are usually about 2 feet long, but those made of other material are longer. The pots of wire and netting are usually cylindrical in shape, but those of splints are round their entire length, being larger at one end than the other, with a slight bulge in the middle. The cylindrical pots are from 6 to 10 inches in diameter, while the splint pots are about 10 inches at the larger end and 8 inches at the other.

Most pots have only one funnel, although some have two. The length of the funnel ranges from 8 to 15 inches, and the outlet is about 2 inches in diameter. Eels can enter these traps with ease, but cannot escape through the funnels. The back of the wire and net pots, where the eels are removed, is of netting which is opened and closed by a pursing string.

These pots are generally set singly, although in some localities they are fished in strings of from 10 to 60, the distance between pots being from 15 to 60 feet. An eeling outfit consists of from 125 to 300 pots. They are sometimes staked, but more frequently located by means of buoys.

In some instances the pots are set at low tide and hauled at high water, while in others they are set at night and hauled in the morning, regardless of water depth. A favorite place to set the pots is in a wooded cove out of the main line of traffic. The eel movements usually take place at night. The entrance of the pot faces upstream so as to catch the eels on their way to sea.

The catch is shipped "in the round" to New York City, the principal eel market of this country. Small eels (upon arrival) are often salted and sold for bait to be used on crab trot-lines. The New York Christmas market--for the Italian-American trade--takes about 300,000 pounds of eels every year. Fishermen from Eastport, Maine, to Crisfield, Maryland, are busy catching eels to supply this market for a month before Christmas. Only live eels are accepted for this holiday market. As these fish are taken by the fishermen, they place them in a pen, or "live-box" in shallow water, where they are held until a sufficient amount

is secured to be shipped by tank trucks. Eels coming into New York from Canada are shipped alive in tank barges.

Many persons--particularly women--have an aversion to eating eel because it resembles a snake, in appearance, and assume that there is an affinity between the two. Mysterious theories, concocted in ancient times, concerning the origin of the eel--in the absence of facts--caused people to let their imaginations run riot. Despite the fact that science has disproved them, some of these fanciful notions still persist today. Aristotle, two thousand years ago, started the fantastic tale that eels arose spontaneously from the mud. Others of his time held their origin to be small worms or horsehair dropped in water.

The true story of the life history of this fish is quite complicated, intensely interesting, and even stranger than the ancient fabulous beliefs. Its age-old mystery of origin--based on the fact that ripe roe has never been found in eels in fresh-water--finally was solved by Dr. Johannes Schmidt, the noted Danish scientist, during the years between 1905 and 1922. Even though solved, the prejudice against the eel as a sea food, because of its snake-like shape, apparently continues to exist in this country.

The cause of all the speculations and misconceptions concerning the eel have been due to the fact that they do not spawn within the confines of the continent or where human observation is possible. Their reproductive organs attain maturity only in the sea while they are migrating to their spawning grounds, southeast of Bermuda.

American eels are born under the influence of the warm Gulf current--about 1,000 miles from our shores. On their spawning grounds, American eels mingle with the European species which have made the longer westward journey, but they never interbreed. In spite of the fact that the breeding grounds overlap, the young of the American species always work back to the west side of the Atlantic and the European turn to the eastern side.

Individuals of both sexes apparently die after spawning once--as do the Pacific salmon--the evidence of this being that no spent eels have ever been seen, and large eels have never been known to run upstream again. Just what becomes of them after spawning is not known.

From counts and estimates based on immature specimens, it is evident that eels are the most prolific of all fishes and of all backboned creatures. From 5 million to 10 million eggs are probably produced by the average-sized eel, and 15 to 20 million must be deposited by the largest ones.

The area of distribution of the eel is peculiar. It lives most of its life and makes most of its growth in the estuaries and fresh rivers tributary to the east coast of America, from the Gulf of St. Lawrence south to the Gulf of Mexico and to Brazil, and is common in the West Indies and at Bermuda.

All eels found in the headwaters of large streams are females; these average between 2 and $3\frac{1}{2}$ feet in length, but may grow to 4 feet and weigh $16\frac{1}{2}$ pounds. The males which average around 14 to 18 inches--never longer than 2 feet--remain in the lower courses of rivers and as a rule do not go above tidewater.

In a general way it is true, as has so commonly been said, that eels seek muddy bottom and still water, but this is not always so, as large ones are only too common in swift-flowing, sandy trout streams on Cape Cod. The fresh-water eel is very common in the Chesapeake region, and in many places it is abundant in brackish water at the mouths of rivers and creeks. Around the periphery of the Gulf of Maine, the occurrence of the eel can be described best in the one word--"universal".

"Slippery as an eel"--the expression applied to some people of questionable character--owes its origin to the fact that the fresh-water eel is always coated with mucous, making it very slick and difficult to hold.

In America today the eel is one of our neglected fisheries--one which could stand a greater drain if the demand required it. In Denmark, Germany, and Sweden, eels have long been highly esteemed as food fish, and quite certainly the quality of the meat of our American fresh-water eel is not different from the European. In Europe, however, the prejudice against eels because of their appearance--if ever it existed--has been largely overcome,

resulting in the building up of an important and valuable commercial fishery, which might well be duplicated in this country.

A hopeful sign for the industry, within recent years, indicates that Americans--particularly those who have traveled abroad extensively--have become more epicurean and are acquiring a pronounced taste for this fish. After sampling the delicate, appetizing flavor of smoked eel, converts are made immediately, for the flesh of the eel is firm and well flavored. In fact, many claim that "Fried Eel a la Jersey" (eel parboiled, dredged with cracker crumbs or flour, and then fried in deep oil until brown) tastes more like chicken than chicken does. Eel may be prepared for the table in a variety of ways. One of these, a famous old Creole recipe, is as follows:

Eels en Matelote

2 pounds eel	1 clove garlic
2 cups minced onion	2 tbsp. flour
1 glass claret	1 tbsp. lard
1 pint oyster broth	1 bay leaf
1 can mushrooms	1 sprig thyme

Cayenne and salt to taste

Clean and skin the eel, cutting in pieces 1 inch in length. Place these in cool water where they should stand about 15 minutes. Take onions and garlic together, chopping fine. Make a roux, melting the lard, when hot adding the onion, and when these begin to brown, gradually adding the flour. Pour in one full wineglass of good claret, a can of mushrooms, then add a pint of oyster broth and allow to cook a while. Season to taste with cayenne and salt, adding the bay leaf and thyme. When the mixture comes to the boiling point, add the eels, then allow to simmer about one hour. Serve with croutons. (This recipe is based on a method given in the Picayune Creole Cook Book.)

The growing popularity of canapes and hors d'oeuvres is also providing a greater market outlet for the smoked product. First among the various fishery specialties canned in New York City comes the eel, both smoked and "pickled" in jelly. Smoked eel--considered quite a delicacy in the east and certain parts of the Middle West--is rapidly becoming so popular on Long Island that roadside stands are selling it.

In the commercial method for smoking, fresh eels are split open, gutted, beheaded, skinned, and washed. After cleaning they are put into brine strong enough to float a potato and held there for 24 hours. Brined fish are rinsed off with fresh water at the end of the brining period, strung on iron rods and hung in the smokehouse. They are first hot-smoked over a fire of corncobs for an hour until nearly cooked, then the fire is smothered by sawdust and they are given another 3 hours' smoking in dense smoke which helps to preserve the product. In Germany, eels are smoked somewhat differently. They cover dressed and brined eels with a paste made of butter, anchovy paste, salt, sugar, and saltpeter. The fish are then given a slow cook smoke for five to six days.

As the trade succeeds in overcoming the purely imaginary notions of the consumer about eel--through disseminating information about the high quality and appetizing features of this fish--it should eventually attain its proper rank among our premier American commercial fisheries.

FISHERIES OF NEW YORK, 1939

By Charles H. Lyles
Junior Fisheries Marketing Agent
Division of Fishery Industries

U. S. Bureau of Fisheries

The catch of fish in the State of New York during 1939 was not markedly different from that of the previous year although several species experienced a decrease in production.

Carp and eels.--These species are captured by fishermen during the year and held in ponds or live-boxes pending arrival of the holiday and fast seasons. The hurricane of 1938 caused considerable damage to the holding facilities which resulted in losses that were felt in 1939 marketing.

Fluke.--An unusually large run of fluke was experienced from May to the latter part of September. The fish were small, however, which caused poor prices to prevail. While the catch was 15 to 20 percent larger than that of the previous year, a price of 1 to 2 cents per pound less was obtained by the fishermen, making an average price for this fish between 7 and 8 cents per pound.

Shad.--A number of circumstances caused the price of shad to decrease during the 1939 season while the volume of the catch remained approximately the same as that of the previous year. This fishery is becoming more and more taken over by casual fishermen because of its proximity to large centers of population and the ease with which a few fish can be captured. The result of this condition has been that the fish frequently are not well cared for after their capture. Comparatively few icing facilities are available and a lack of skill is experienced in the handling of gear.

White perch.--Catches of this species were very good. A price averaging 4 cents per pound was paid the fishermen for these fish.

Whiting.--A number of important grounds which have been utilized in dragging for whiting were closed to fishing by New York State during the year. This caused a general lowering of the catch of whiting.

Other fish.--Bluefish, weakfish, and striped bass were all unusually scarce. Prices for these fish remained high throughout the season.

Clams.--Clams were so plentiful throughout the year that low prices on all but littlenecks made profits difficult.

Crabs.--A shortage of crabs caused the 1939 production to be only a small fraction of that of 1938. Difficulties experienced in capturing crabs caused a general decline of the fishing operations.

FISHERIES OF TEXAS AND LOUISIANA, 1939

By Earl V. Ebner
Junior Fisheries Marketing Agent
Division of Fishery Industries

U. S. Bureau of Fisheries

Commercial fishing in Texas during 1939 was disappointing to virtually the entire fishing industry of that State. Fish were not abundant and marketing conditions were oppressive. Shrimp fishing was somewhat better than in 1938. Oyster production was high but prices allowed only meager profits. Competition of Mexican caught shrimp and fish has been keenly felt by Texas fisheries. Controversies concerning wages at times hampered the production of various fishery products.

In Louisiana, shrimping and oystering, the major fishing industries of the State, were fairly steady throughout 1939. Oystering has shown an increase for each of the past five years. The increase is attributed to shell planting programs and publicity emphasizing the use of the oyster as a year-round food. Sufficient year-round demand for oysters has been developed so that several dealers are finding it profitable to operate throughout the entire year.

Shrimp production was handicapped by an early season scarcity of shrimp and a fluctuating market later in the year.

Among other Louisiana fisheries, that for crabs alone made notable progress. The hard crab catch increased by over 10 percent as compared with 1938 and the market remained favorable for this product. The market for soft crabs also was very satisfactory.

FISHERY ADVISORY COMMITTEE HOLDS MEETING ON FEBRUARY 2 AND 3

The Fishery Advisory Committee for the Department of the Interior held its annual meeting in the Secretary's conference room in Washington, D. C., on February 2 and 3. Out of a total membership of 33, 22 members attended. Representatives from each of the six United States regions were present, the chairman of each district expressing the viewpoints of the industry in his region as determined by local meetings held prior to the national conference.

This Committee was formed in 1935 to help the Bureau of Fisheries discharge its broad duty of conserving the fishery resources and fostering the well-being of the fishery industries. Its establishment was designed to aid in the planning and maintenance of a sound Federal program in fisheries work. It was logically considered that consultation with businessmen having a first-hand acquaintance with fishery problems would be of advantage in the Bureau's operations. Since 1935 the Fishery Advisory Committee has become increasingly active. Recommendations concerning the Bureau's activities have been formulated by this group at annual or semi-annual conferences. The recommendations have been utilized by the Department and the Bureau throughout this period and have resulted in a number of modifications and enlargement of the Bureau's programs. The Committee's usefulness has increased through the years as the Bureau and the Committee have enlarged their mutual understanding of the problems confronting the fishery industries and the Federal Government.

The 1940 meeting was opened by an address given by Alvin J. Wirtz, Under Secretary of the Department of the Interior. A welcoming statement which outlined the present activities of the Bureau of Fisheries was made by Acting Commissioner Charles E. Jackson. The ensuing discussions covered the problems of most vital importance to the commercial and game fisheries of the United States and Alaska.

Chas. W. Triggs of Chicago served as chairman in the absence of Mr. Poole and was elected chairman for the coming year. Mr. H. B. Friele was elected first vice chairman and Mr. O. G. Dale, Jr., second vice chairman.

WHOLESALE AND RETAIL PRICES

A report from the Bureau of Labor Statistics discloses that the index of wholesale prices of all commodities dropped three-tenths of one percent during the week ending March 2 and five-tenths of one percent from February 3 to March 2. The index of wholesale food prices also declined, falling seven-tenths of one percent during the week and 1.7 percent for the four-week period. Resulting indexes on March 2 were 78.4 for all commodities and 70.5 for foods as compared with a figure of 100 for the 1926 averages.

Increases in retail food costs between January 16 and February 13 were recorded in 48 of the 51 cities covered by the U. S. Bureau of Labor Statistics in its food price studies. Decreases were recorded for only 3 cities. The average increase was 1.3 percent. Higher prices were reported for 26 of the 61 food items on which prices were secured, lower prices were reported for 20 items, and 15 showed no change. The all-foods index was 78.1 percent of the 1923-25 average, or 1.7 percent higher than the index of 76.8 of a year ago. Pink salmon prices continued to rise while the price of red salmon remained the same as last month. The average retail price of a 16-ounce can of pink salmon stood at 15.2 cents on February 13, a price 1.3 percent higher than four weeks before, and 22.4 percent higher than on February 14, 1939. The average price of a 16-ounce can of red salmon, meanwhile, stayed at 25.3 cents, a rise of 8.9 percent over the February 14, 1939, quotations.

MISSOURI PROHIBITS SALE OF BLACK BASS

Missouri recently became the 40th State prohibiting sale of black bass within its boundaries at any time, regardless of where taken.

SALES OF FISH IN RETAIL STORES

Preliminary figures indicate that out of about 4,000 retail stores reporting the volume of their business in fresh and frozen fish and shellfish for 1938 to the Bureau of Fisheries, only about 1½ percent did more than $30,000 annual fish business each. About 75 percent did less than $2,000 fish business each. Approximately 20 percent grossed between $250 and $500 annually, and an additional 17 percent less than $250. Thus, some 37 percent of the stores had fish sales of less than $10 per week.

VOLUME AND VALUE OF NEW ENGLAND VESSEL LANDINGS INCREASE

There were 24,995,000 pounds of fishery products landed in January at the ports of Boston and Gloucester, Mass., and Portland, Maine, by fishing craft of 5 net tons capacity or over. These were valued at $838,000 to the fishermen. Details of these landings are published in Fisheries Statistical Bulletin No. 1367. The totals reflect an increase of 13 percent in volume and 25 percent in value over the receipts for the same month in 1939.

Leading items landed included haddock, 8,969,000 pounds, valued at $374,000; cod, 4,105,000 pounds, valued at $179,000; rosefish, 6,524,000 pounds, valued at $106,000; flounders, 1,567,000 pounds, valued at $65,000; and pollock, 2,716,000 pounds, valued at $58,000. These items provided 95 percent of the total volume and 93 percent of the value of the total receipts at the three ports in January.

BOSTON FISH PIER PRICES CONTINUE TO RISE

From the standpoint of the return to the fishermen at the Boston Fish Pier, the year 1940 has made a more favorable beginning than that encountered in 1939. Tabulation by the Boston Market News office of landings at the Fish Pier for the past January reveal a total of 20,943,000 pounds of fish received in 420 fares, for which an average of 3.58 cents per pound was paid. This is an increase of 20 percent in volume over 1939 landings and a 13 percent rise in average price per pound. Average prices paid for the most important varieties of fish caught offshore were as follows: Large cod, 5.01¢; market cod, 3.78¢; haddock, 4.57¢; scrod haddock, 3.46¢; pollock, 2.16¢; and rosefish, 1.65¢.

BOSTON FISH SALES REACH AVERAGE OF 3.58 CENTS PER POUND

Average prices for fish on the Boston Fish Pier reached in January the highest point experienced in many months, according to compilations of the Boston office of the Fishery Market News Service. An average of 3.58 cents per pound was paid for the 20,943,000 pounds of fish landed. These fish, obtained in 420 trips to the fishing grounds, were worth about $750,000 to the fishermen.

Landings by inshore craft totaled an unusually small amount, 784,000 pounds, representing only 4 percent of total landings. Flounders contributed 50 percent and cod 36 percent of the inshore figures.

Fishing by offshore vessels, which yielded the remaining 96 percent of the landings, produced 43 percent haddock and 18 percent each of cod and rosefish. Fares listed included 201 inshore trips and 219 to offshore waters.

LANDINGS OF FISH LIVERS IN NEW ENGLAND INCREASE

According to Bureau of Fisheries records, during 1939, 5,254,000 pounds of fish livers were landed at Boston and Gloucester, Mass., and Portland, Maine, as compared with 4,864,000 pounds in 1938 and 2,921,000 pounds in 1937.

SHRIMP LEAD IN SOUTH ATLANTIC AND GULF STATE FISHERIES

The commercial catch of fishery products in the South Atlantic and Gulf States in 1938 amounted to 621,858,000 pounds, valued at $13,073,000, according to information contained in Fisheries Statistical Bulletin No. 1365. This represents an increase of 14 percent in volume and a decrease of 8 percent in value as compared with the catch and its value in 1937. Based on the value to the fishermen, shrimp was by far the most important product, the catch amounting to 140,150,000 pounds, valued at $4,545,000. Based on the volume of the catch, 5 species of fish and shellfish--menhaden, mullet, hard crabs, shrimp, and oysters--accounted for 524,245,000 pounds, or 83 percent of the total yield of the fisheries.

Florida ranked first among the States in the South Atlantic and Gulf area with respect to both volume and value of the catch, the production in that State amounting to 241,443,000 pounds, valued at $4,988,000.

In the 8 States comprising the South Atlantic and Gulf region, employment was provided by the fisheries in 1938 to 48,300 persons. They consisted of 29,600 fishermen, 18,200 persons in wholesale and manufacturing establishments, and 500 on transporting craft. There were 49,300 persons employed in these fisheries in 1937. Salaries and wages paid to employees in the 742 fishery wholesale and manufacturing establishments amounted to $3,452,000, and manufactured products produced by these firms were valued at $11,763,000.

HALIBUT AND SAUGER LEAD IN CHICAGO RECEIPTS

Monthly totals received from the Chicago office of the Fishery Market News Service show January receipts of fresh and frozen fishery products at the Chicago Wholesale Fish Market totaling 4,101,000 pounds. In this total 71 classifications of sea food are combined. The poundage represents a decrease of 6 percent from the December total but an increase of 11 percent as compared with the January 1939 figure.

Fresh-water fish contributed the greater part of the receipts, 2,304,000 pounds being recorded. Salt-water fish totaling 1,007,000 pounds and shellfish totaling 789,000 pounds were also received. Receipts of halibut were considerably in excess of those in December and in January, 1939, making this species the most important of the items received. The first five species of sea food, in order of importance, were, halibut, 531,000 pounds; sauger, 503,000 pounds; whitefish, 373,000 pounds; lake trout, 309,000 pounds; and shrimp, 299,000 pounds. Halibut receipts were all frozen and included 421,000 pounds caught by United States vessels and shipped in bond from British Columbia.

The seasonal increase of shipments of sauger moved this item to second place in poundage received. Manitoba furnished virtually the entire supply of this fish. Whitefish imports totaled 290,000 pounds, including 167,000 pounds from Alberta. Lake trout came chiefly from Michigan and Wisconsin, and shrimp from Louisiana and Texas. Rail shipment facilities carried 45 percent of the receipts, while 29 percent arrived by express and 26 percent by truck. Twenty-six States, Alaska, and 8 Provinces of Canada contributed to the totals.

FISHERIES OF WASHINGTON AND OREGON

The winter gill net fishery for salmon off the Columbia River has been disappointing this year, according to a monthly report received from the Bureau's statistical agent for the North Pacific States. A considerable number of salmon has been reaching the fresh fish markets, however, from the troll-line fishery off the Washington coast. Fishermen have been receiving 22 to 26 cents per pound for dressed salmon. Large amounts of smelt reached the fresh fish markets during January. These were taken chiefly from a run of unprecedented proportions on the Naselle River.

FISHERIES OF DENMARK

Denmark's geographic position in relation to the seas and bays bordering the European countries quite naturally makes fishing an important phase of her economy. Her fishermen operate in all bordering waters and compete in the fisheries of the North Sea. In addition, a yield of fish and shellfish is obtained from interior waters. Figures have been published by the Danish Bureau of Fisheries covering these fisheries in 1938. In this year 18,468 fishermen caught fish valued at an equivalent of $8,250,000. Eight hundred thousand oysters were also harvested. The take of fish aggregated 176 million pounds, consisting chiefly of plaice, cod, and herring. Eels, haddock, and mussels also contributed materially to the catch.

The bulk of the yield of Denmark's fisheries is utilized in her export trade to other European countries.

COOPERATIVE CONTROLS ONE-FOURTH OF HERRING SOLD IN LITHUANIA

The Lithuanian Cooperative Wholesale Society "Lietukia" controls 26 percent of the herring marketed in that country. These herring are sold through over a hundred retail cooperative societies which are members of the wholesale society.

NEW COOPERATIVE MARKETS FISH IN SWEDEN

The Swedish Cooperative Fish Marketing Society has just been organized, according to a report from the International Labor Office in Geneva. The fish marketing cooperative is owned jointly by the Swedish Cooperative Wholesale Society and the Swedish West Coast Fishermen. The association of Swedish West Coast Fishermen is made up of a number of cooperative societies which will provide the fish supplies of the new organization. The 700 cooperative societies making up the Swedish Cooperative Wholesale Society, operate some five or six thousand retail stores.

The fish will be transmitted from one cooperative to another. In the same way, a large volume of farm products reaches the Swedish consumer through sales by farmers' cooperatives to the associations of consumer cooperatives. Thus a system of distribution which bulks very large in Swedish economy will be available as a marketing agency for the fishermen.

The marketing of fresh fish in Sweden is complicated by laws restricting the sale of such fish to stores which handle only fish. In consequence the cooperative societies do not handle fresh fish extensively, as many are not in a position to operate fish stores. However, a recent development to overcome the difficulties due to lack of volume of business in individual stores is now gaining ground. A group of nearby cooperative societies combine to buy and operate a mobile fish shop mounted on a truck chassis. This shop covers all the towns served by the group of cooperatives according to a schedule by which it stands at certain locations in the various communities at specified times.

FROZEN FISH TRADE

Domestic Frozen Fish Holdings Show Slight Increase

Frozen fishery products totaling 62,391,000 pounds were being held in cold-storage plants in the United States and Alaska on February 15, according to the Bureau's Statistical Bulletin No. 1366, recently released. This total is 140,000 pounds greater than the total holdings on February 15, 1939. It is, however, a decrease of 21 percent from the total holdings on January 15. Principal items included were whiting, 5,717,000 pounds; salmon, 4,469,000 pounds; pollock fillets, 4,451,000 pounds; mackerel, 4,278,000 pounds; haddock fillets, 3,307,000 pounds; rosefish fillets, 3,029,000 pounds; shrimp, 2,962,000 pounds; and halibut, 2,898,000 pounds.

The decline in holdings from the January 15 total of 78,563,000 pounds was the result of reduction of all important items. Halibut stocks dwindled to 56 percent of the January 15 total.

Stocks of rosefish fillets on hand were 179 percent greater than those on February 15, 1939.

Fishery products frozen during the month ending February 15 amounted to 6,875,000 pounds. This is an increase of 6 percent above the amount frozen by cold-storage warehouses in the United States and Alaska in the same period in 1939. Forty-six percent of the products frozen consisted of rosefish and haddock fillets and shrimp. Sea herring, of which 215,000 pounds were frozen during the month, made a six-fold increase over the amount frozen in the corresponding period in 1939.

Cured herring held in domestic cold-storage warehouses amounted to 16,336,000 pounds, an increase of 12 percent both above the amount held a month previous and the holdings on February 15, 1939. Mild-cured salmon stocks totaled 6,403,000 pounds, 32 percent higher than a year previous but a decrease of 6 percent since January 15.

Withdrawals Decrease Boston Cold-storage Holdings

At Boston, cold-storage holdings of frozen fishery products on the last Wednesday of February, as reported by the Market News Service, amounted to 7,807,000 pounds, a decline since January 31 of 2,946,000 pounds in the amount being held. Holdings of fillets decreased over two million pounds, reductions including cod fillets, 860,000 pounds in warehouses on January 31, to 333,000 pounds of holdings on February 28; haddock fillets, 1,609,000 pounds to 743,000 pounds; pollock fillets, 2,567,000 pounds to 1,653,000 pounds; and rosefish fillets, 551,000 pounds to 312,000 pounds. Mackerel stocks decreased from 1,935,000 pounds to 1,595,000 pounds, and whiting stocks changed from 745,000 pounds to 505,000 pounds. Holdings of other species reflected lesser movements. Total salt-water stocks decreased from 9,756,000 pounds to 7,178,000 pounds; fresh-water species declined from 121,000 pounds to 18,000 pounds due to removals of ciscoes and whitefish stocks; and shellfish declined from 876,000 pounds to 611,000 pounds.

When compared with the records of holdings on March 1, 1939, a year previous, the February 28, 1940, figures show an increase of 472,000 pounds. Salt-water fish stocks were 446,000 pounds higher than a year ago, with pollock fillets increasing notably, and smelt, swordfish, and whiting displaying marked decreases. A significant difference also occurred within the stocks of mackerel as small mackerel showed an increase from 36 percent of the total mackerel holdings on the 1939 date to 83 percent of the total stocks of mackerel on February 28, 1940. This shift is due to the preponderance of small mackerel in the 1939-40 catches of mackerel in the North Atlantic fisheries. Holdings of fresh-water species were negligible at this time in both 1939 and 1940 while shellfish stocks showed an increase of 30,000 pounds in the 1940 figures. In shellfish stocks, scallops and squid increased as shrimp recorded a drop from 205,000 pounds on March 1, 1939, to 11,000 pounds on the corresponding date in 1940.

Cold-storage Holdings in New York Continue to Decrease

The decline in holdings of frozen fishery products in cold-storage warehouses in New York City which was evident in January continued in the five-week period ending February 29. Figures compiled by the New York office of the Market News Service disclose that the total holdings on February 29 amounted to 6,973,000 pounds, including 3,742,000 pounds of salt-water varieties; 2,228,000 pounds of fresh-water varieties; and 1,003,000 pounds of shellfish. Withdrawals in the five-week period previous to February 29 had caused total holdings to decrease by 2,009,000 pounds; salt-water varieties to decline by 905,000 pounds; fresh-water fish stocks to lose 331,000 pounds; and shellfish holdings to decrease by 773,000 pounds.

Butterfish, the leading salt-water item in volume on January 25, fell to third place as stocks of this item decreased 162,000 pounds to 393,000 pounds, while shad remained strong

at 435,000 pounds and chinook salmon stocks increased to 424,000 pounds to take first and second places, respectively, among salt-water items. Important, also, were mackerel, silver salmon, and sablefish. In fresh-water species, whitefish replaced sturgeon as the most important item, while sturgeon remained important and cisco stocks declined. Leading stocks were whitefish, 900,000 pounds; sturgeon, 792,000 pounds; and ciscoes, 298,000 pounds. Ciscoes had recorded a 309,000-pound decline during the five-week period.

The leading shellfish items on hand on February 29 were spiny lobster tails, 285,000 pounds, and shrimp, 212,000 pounds. Shrimp holdings decreased from a total of 635,000 pounds on January 25.

The total current New York cold-storage holdings show a decrease of 369,000 pounds when compared with the total of a year previous. Salt-water items increased by 195,000 pounds and fresh-water varieties by 131,000 pounds, while shellfish decreased by a poundage of 695,000. Increases were evident in much higher holdings of butterfish, sablefish, king salmon, shad, whitefish, and spiny lobster tails in the 1940 totals, while notable declines occurred in the stocks of Caspian salmon, smelt, coscoes, and shrimp. The major difference occurred in the case of shrimp, the stock of which fell from 1,097,000 pounds on February 23, 1939, to 212,000 pounds on February 29, 1940, a drop of 81 percent from the earlier total.

Chicago Cold-storage Stocks have General Decline

Chicago cold-storage holdings on the last Thursday in February included 4,179,000 pounds of fishery products, a figure 23 percent below the total holdings of the last Thursday in January and 21 percent under the February 23, 1939, figure, according to reports compiled by the Fishery Market News office in Chicago. These decreases were reflected in fresh-water, salt-water, and shellfish classifications. Greatest change appeared in declines of stocks of lake herring, lake trout, and shrimp, and an increase of supplies of whitefish in the five weeks prior to the last Thursday in February, while changes from the 1939 figures were most pronounced in decreases of sauger fillets, whitefish, lake herring, and shrimp, and an increase of lake trout stocks.

Included in the total current holdings were fresh-water items, 2,298,000 pounds; salt-water varieties, 1,334,000 pounds; shellfish, 427,000 pounds; and unclassified items, 119,000 pounds.

Lake trout stocks exceeded the total of a year previous by 268,000 pounds, reaching a total of 604,000 pounds. The holdings of shrimp, meanwhile, fell to 253,000 pounds from figures of 600,000 pounds on January 25, 1940, and 746,000 pounds on February 23, 1939. Sauger fillets, with 106,000 pounds in cold storage on February 23, 1939, were reduced to a stock of 4,000 pounds on February 29 of this year.

Further Decline of Holdings of Frozen Fish in Canada

Preliminary figures on the holdings of frozen fresh fishery products in cold-storage plants in Canada on March 1 as released by the Dominion Bureau of Statistics show holdings of 18,597,000 pounds on hand on that date. This total is 78 percent of the poundage held on February 1, 1940, and 87 percent of the March 1, 1939, holdings. The reported poundage of the most important species on hand included sea herring, 5,533,000 pounds; salmon, 2,080,000 pounds; mackerel, 1,623,000 pounds; whitefish, 1,590,000 pounds; and halibut, 1,395,000 pounds.

Canadian cold-storage plants also held 1,672,000 pounds of frozen smoked fish on March 1. This poundage represents 76 percent and 80 percent of the volume of the stocks of these products on hand on February 1, 1940, and March 1, 1939, respectively. Groundfish fillets, finnan haddie, and sea herring kippers comprised over 90 percent of the current total.

Fresh fish and fishery products frozen in Canadian plants during February totaled 2,357,000 pounds. Fifty-four percent of this figure represented sea herring, while cod, cod fillets, haddock, and haddock fillets constituted less important items. Also frozen

were smoked fish amounting to 732,000 pounds, including 464,000 pounds of groundfish fillets, 206,000 pounds of finnan haddie, and 59,000 pounds of sea herring kippers. The total of fresh and smoked fish frozen in February represents an increase of 109 percent over the February 1939 figure and a decrease of 10 percent as compared with the total for January 1940.

CANNED FISH TRADE

Canned Alaska Red Salmon Comprise 71 Percent of Unsold Stocks

A total of 1,490,000 standard cases of canned salmon remained unsold in packers' hands on February 29, according to a compilation by the Association of Pacific Fisheries. These stocks were 27 percent less than those of the corresponding date in 1939, when there were 2,033,000 cases on hand. Of the current total, 1,056,000 cases, or 71 percent, were Alaska red salmon--slightly lower than the 1,084,000 cases held on February 28, 1939. Other unsold stocks included the following numbers of standard cases: Chinook or king, 39,000; chum, 118,000; pink or humpback, 179,000; silver or coho, 69,000; and Puget Sound sockeye, 28,000. These stocks are all lower than those of 1939, the stocks of pink salmon representing a drop of 69 percent below the 1939 figure for the end of February.

Shrimp Canning Slackens

Shrimp canning activity continued to moderate during the month ending February 24. In the last week in that period only 63 standard cases of shrimp were packed, bringing the monthly total to 4,430 cases and the total since July 1, 1939, to 1,064,000 cases. These figures represent the pack of 40 plants in the Gulf and South Atlantic States operating under the Seafood Inspection Service of the Food and Drug Administration. The seasonal pack to February 24 compares favorably with the 991,000 cases canned in the corresponding part of the 1939 season; 1,126,000 cases canned in a similar period in 1938; and 795,000 cases packed to February 20 in the 1937 season.

California Sardine Pack Exceeds that of 1938-39

The total output of California sardines for the 1939-40 season through January aggregated about 2,665,000 cases as compared with 2,000,000 cases for the same period in the 1938-39 season--an increase of approximately 33 percent. This information is based on preliminary figures issued by the Division of Fish and Game of the State of California. The pack for the month of January 1940 amounted to 571,000 cases, increasing slightly over that for January 1939, which totaled 568,000 cases. For the 5 months of the current season, from September through January, the pack by districts has been as follows: Monterey, 1,605,000 cases; Southern California, 794,000 cases; and San Francisco, 266,000 cases.

Yellowfin Tuna Swells January Tuna Pack

The pack of tuna and tunalike fishes in California for the month of January 1940 amounted to approximately 186,000 cases of 48 half-pound cans as compared with 26,000 cases for the same month a year ago, according to the preliminary release of the Division of Fish and Game of the State of California. Ninety percent of the entire January pack consisted of yellowfin tuna. Other contributing commodities, according to volume canned, were striped tuna (skipjack); bonito; tuna flakes; tuna, tonno style; yellowtail; and bluefin tuna. About 89 percent of the January 1940 volume was packed in the San Pedro district; the remainder, in the San Diego district.

California Mackerel Pack Increases 41 Percent

During the month of January 1940 the output of canned mackerel in California amounted to about 189,000 cases of 48 one-pound cans, as shown in preliminary data released by California's Division of Fish and Game. This marks an increase of 41 percent over the produc-

tion for January 1939, which amounted to nearly 134,000 cases. Virtually the entire pack for the first month of this year--97 percent--was produced in the San Pedro district. The remaining 3 percent was canned in the San Diego district.

MARKED INCREASE IN FOREIGN TRADE IN JANUARY

United States imports and exports of edible fishery products reached in January a combined magnitude not exceeded since October 1936, according to data furnished by the Bureau of Foreign and Domestic Commerce. This was largely due to an increase of exports of 43 percent over those of January 1939. Imports in January 1940 exceeded those of the corresponding month of 1939 by 5 percent.

Imports totaling 38,836,000 pounds were received in January. Principal items included in this total were fresh and frozen fresh-water fish, 7,426,000 pounds; salted and pickled herring, 7,017,000 pounds; canned crab meat, 6,879,000 pounds; cod, haddock, and hake, 2,973,000 pounds; and canned tuna, 2,281,000 pounds. Canned crab meat imports jumped 603 percent and canned tuna increased 228 percent as compared with January 1939 figures. The imports of cod, haddock, and hake represented a decrease of 41 percent from the corresponding 1939 figure.

In the January exports, an increase of 138 percent in shipments of canned sardines over the January 1939 figure permitted a rise in total exports notwithstanding decreases of 25 percent in canned salmon shipments and 72 percent in exports of canned shrimp. Edible fishery products exported in January amounted to 17,252,000 pounds,including chiefly 11,740,000 pounds of canned sardines, 3,473,000 pounds of canned salmon, and 118,000 pounds of canned shrimp.

CATCH AND EXPORTS OF CANADIAN FISH, 1939

Canada's exports of fishery products for 1939 were valued at $29,619,000, according to information published in the Fisheries News Bulletin of the Department of Fisheries, Ottawa, Canada. Of these exports, items aggregating $13,650,000 in value were shipped to the United States, and Great Britain received products valued at $8,711,000.

Fresh and frozen fish accounted for $12,309,000 of the total; canned products, for $11,549,000; and dried, salted, and pickled fish, for $3,884,000.

Canada's total catch for 1939 reached a total of 956,400,000 pounds with a total value of $16,616,000. These figures are described as unrevised and preliminary.

AMERICAN PURCHASES OF NORWEGIAN COD-LIVER OIL DECLINE

Comparatively high prices prevailed on the Norwegian cod-liver oil market during November as relieved war tension allowed increased shipments to Germany, England, and other European countries. This information was received from the American Consulate in Bergen and published in Foodstuffs Round the World. The high prices reduced American purchases. There were rumors of speculative deals in oil being made to take advantage of possible rises in price.

Norwegian exports for November included 316,000 gallons of medicinal cod-liver oils, 108,000 gallons of cod-liver oil for poultry feed, and 225,000 gallons of oil for technical use.

JAPANESE EXPORTS OF CANNED SEA FOOD

In Japan's export trade in her four principal canned sea foods, salmon is sold mostlyon the European market, sardines are exported chiefly to Asiatic countries, while the heaviest demand for tuna and crab comes from the United States. A report describing recent develop-

ment in this export trade has been formulated by one of the Department of Commerce's trade agents.

Of the Japanese exports of canned salmon in 1938, 74 percent went to Great Britain. A record total of 2,575,000 cases was exported (including Kamchatka exports). The rate of export decreased in the first six months of 1939, however, and only 347,000 cases were shipped in that period. Sardine exports during these six months totaled 515,000 cases--20 percent greater than those of the first six months of 1938. Exports of canned crab also increased, although remaining below 1937 figures. Cases of canned crab totaling 142,000 were exported, 52 percent of which went to the United States. This represented an increase of 32 percent over exports of the first half of 1938.

Tuna exports during the first six months of 1939 amounted to 266,000 cases--an increase of 115 percent over the corresponding period in 1938 but still far below 1937 totals. The United States received 74 percent of this trade.

THE COVER PAGE

The pound net or fish trap is used as an important type of fishing gear in all parts of the world. Its principles are adaptable to a wide range of variations in materials and fishing conditions. The pound net pictured is being operated in the shad fishery on Chesapeake Bay. Statistics collected by the Bureau indicate that about 15,000 trap nets, pound nets, and weirs are operated annually in the United States, accounting for over 200 million pounds of sea food at a value of over 6 1/3 million dollars.

FISHERY TRADE INDICATORS

(Expressed in Thousands of Pounds)

Item	Month	Latest month	Same month a year ago	Previous month
FRESH FISH LANDINGS				
Boston, Mass.	January	20,556	19,679	22,533
Gloucester, Mass.	do	3,189	1,783	7,431
Portland, Me.	do	1,251	736	1,222
Boston, Gloucester, and Portland:				
Cod	do	4,105	3,573	5,409
Haddock	do	8,969	8,727	8,692
Pollock	do	2,716	2,028	7,592
Rosefish	do	6,524	4,750	6,280
FISH RECEIPTS, CHICAGO 1/				
Salt-water fish	do	1,007	830	1,045
Fresh-water fish	do	2,304	2,404	2,019
Shellfish, etc.	do	789	480	1,292
By truck	do	1,048	790	1,439
By express	do	1,804	649	989
By freight	do	1,849	2,275	1,928
COLD-STORAGE HOLDINGS 2/				
New York, N. Y.:				
Salt-water fish	February	3,742	3,547	4,646
Fresh-water fish	do	2,228	2,097	2,560
Shellfish, etc.	do	1,003	1,698	1,776
Boston, Mass.:				
Salt-water fish	do	7,178	8,273	9,756
Fresh-water fish	do	18	32	121
Shellfish, etc.	do	611	663	876
Chicago, Ill.:				
Salt-water fish	do	1,334	1,474	1,557
Fresh-water fish	do	2,298	2,522	2,810
Shellfish, etc.	do	427	846	806
Unclassified	do	119	437	258
United States:				
Cod fillets	do	1,411	1,080	2,261
Haddock fillets	do	3,307	3,027	4,727
Halibut	do	2,898	4,742	5,177
Mackerel	do	4,278	3,357	5,270
Pollock fillets	do	4,451	2,890	5,374
Rosefish fillets	do	3,029	1,086	3,237
Salmon	do	4,469	7,946	5,923
Whiting	do	5,717	5,846	7,586
Shrimp	do	2,962	5,324	3,507
New England, all species	do	19,783	15,733	24,779
Middle Atlantic, all species	do	12,823	12,903	15,723
South Atlantic, all species	do	4,193	2,596	4,718
North Central East, all species	do	11,101	10,441	14,032
North Central West, all species	do	3,599	4,259	4,724
South Central, all species	do	1,407	1,860	2,446
Pacific, all species	do	9,486	14,318	12,553
FOREIGN FISHERY TRADE 3/				
Exports:				
All edible fishery commodities	January	17,252	12,066	10,699
Canned salmon	do	3,473	4,612	2,532
Canned sardines	do	11,740	4,938	6,187
Canned shrimp	do	118	414	238
Imports:				
All edible fishery commodities	do	38,836	36,994	26,251
Fresh-water fish and eels, fresh or frozen	do	7,426	7,357	4,620
Canned tuna	do	2,281	696	591
Canned sardines	do	1,018	2,151	1,456
Cod, haddock, hake, etc., pickled or salted	do	2,973	4,994	4,514
Herring, pickled or salted	do	7,017	7,429	2,182
Crab meat, sauce, etc.	do	6,879	978	1,115
Lobsters, not canned	do	1,449	1,220	1,425
Lobsters, canned	do	118	52	102

1/ Includes all arrivals as reported by express and rail terminals, and truck receipts as reported by wholesale dealers, including smokers.

2/ Data for individual cities are as of the last Thursday of the month, except those at Boston which are for the last Wednesday of the month, and those for geographical areas and the total of the United States which are as of the 15th of the month.

3/ From data compiled by the Bureau of Foreign and Domestic Commerce.

Note.--Data for the latest month are subject to revision.

PRINCIPAL FIELD OFFICES AND LABORATORIES OF THE U. S. BUREAU OF FISHERIES

Division of Fishery Industries

Boston, Mass.	B. E. Lindgren	253½ Northern Ave. Market News Service
Chicago, Ill.	E. C. Hinsdale	200 N. Jefferson St. Market News Service
College Park, Md.	J. M. Lemon	Horticultural Bldg., U. of Md. Fish. Tech. Laboratory
Jacksonville, Fla.	S. C. Denham	309 Duval Bldg. Market News Service
New Orleans, La.	C. E. Peterson	1100 Decatur St. Market News Service
New York, N. Y.	W. H. Dumont	33-A Fulton St. Market News Service
San Pedro, Calif.	C. B. Tendick	Post Office Bldg. Fishery Statistics
Seattle, Wash.	V. J. Samson	421 Bell St. Terminal. Market News Service
Seattle, Wash.	R. W. Harrison	2725 Montlake Blvd. Fisheries Tech. Laboratory

Division of Fish Culture

LaCrosse, Wis.	C. F. Culler	District Headquarters
Seattle, Wash.	F. J. Foster	2725 Montlake Blvd. Regional Headquarters

Division of Scientific Inquiry

Ann Arbor, Mich.	Dr. John Van Oosten	University Museums. Great Lakes Fish. Investigations
Beaufort, N. C.	Dr. Herbert F. Prytherch	Fisheries Biological Laboratory
Cambridge, Mass.	W. C. Herrington	Room A-210 Harvard Biol. Lab. N.At.Fish. Investigations.
College Park, Md.	Robert A. Nesbit	Horticultural Bldg., U. of Md. Mid. & S. At. Fish. Invest.
Columbia, Mo.	Dr. M. M. Ellis	101 Willis Ave. Interior Waters Investigations
Milford, Conn.	Dr. Victor Loosanoff	Fish. Laboratory. New England Oyster Investigations
New Orleans, La.	M. J. Lindner	336 Chartres St. Gulf Shrimp Investigations
Pensacola, Fla.	Dr. A. E. Hopkins	Box 1826. Gulf Oyster Investigations
Seattle, Wash.	Dr. F. A. Davidson	2725 Montlake Blvd. Fisheries Biological Laboratory.
Stanford University, Calif.	O. E. Sette	Room 450-B Jordan Hall. Pilchard investigations

Division of Alaska Fisheries

Juneau, Alaska	Ralph A. Ferrandini	Federal Bldg. Alaska Fisheries Service
Seattle, Wash.	Ted Murphy (Miss)	706 Federal Bldg. Alaska Fisheries Service

FISHERY INDUSTRIAL AND MARKETING PUBLICATIONS

There follows a list of some of the industrial or marketing publications of the Bureau of Fisheries, which are available for purchase from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices quoted. Price List 21, which includes a complete list of the available publications of the Bureau, may be obtained from the Superintendent of Documents, free of charge.

INVESTIGATIONAL REPORTS

No. 43. Some Effects of Ultraviolet Irradiation of Haddock Fillets. 1939. 5¢.

No. 42. A Plan for the Development of the Hawaiian Fisheries. 1939. 10¢.

No. 41. The Mineral Content of the Edible Portions of Some American Fishery Products. 1938. 5¢.

No. 40. Pacific Salmon Oils. 1939. 5¢.

No. 39. Trade in Fresh and Frozen Fishery Products and Related Marketing Considerations in the San Francisco Bay Area. 1938. 10¢.

No. 38. Marketing of Shad on the Atlantic Coast. 1938. 10¢.

No. 37. Preliminary Report on the Cause of the Decline of the Oyster Industry of the York River, Va., and the Effects of Pulp-mill Pollution on Oysters. 1938. 10¢.

No. 32. Studies on Drying Cod and Haddock Waste. 1935. 5¢.

No. 30. Effect of Manufacture on the Quality of Nonoily Fish Meals. 1935. 5¢.

No. 28. Studies on the Utilization of Swordfish Livers. 1935. 5¢.

No. 26. Fishery for Red Snappers and Groupers in the Gulf of Mexico. 1935. 5¢.

No. 25. The Iodine Content of Some American Fishery Products. 1935. 5¢.

No. 24. Modifications in Gear Curtail the Destruction of Undersized Fish in Otter Trawling. 1935. 5¢.

No. 21. Shrimp Industry of the South Atlantic and Gulf States. 1934. 10¢.

No. 20. Studies on the Smoking of Haddock. 1934. 5¢.

No. 18. The Iodine Content of Oysters. 1934. 5¢.

No. 16. Developments in Refrigeration of Fish in the United States. 1932. 5¢.

No. 14. Fisheries of the Virgin Islands of the United States. 1932. 5¢.

No. 13. Fisheries of Puerto Rico. 1932. 5¢.

No. 7. Market for Marine Animal Oils in the United States. 1931. 15¢.

No. 1. Menhaden Industry. 1931. 25¢.

FISHERY CIRCULARS

No. 25. Natural History and Methods of Controlling the Common Oyster Drills. 1937. 5¢.

No. 23. Decline in Haddock Abundance on Georges Bank and a Practical Remedy. 1936. 5¢.

No. 22. Organizing and Incorporating Fishery Cooperative Marketing Associations. 1936. 5¢.

No. 21. The Story of Oysters. 1936. 5¢.

No. 19. Practical Fish Cookery. 1935. 5¢.

No. 18. Conditions Affecting the Southern Winter Trawl Fishery. 1935. 5¢.

No. 15. Aquatic Shell Industries. 1934. 5¢.

No. 12. Introduction of Japanese Oysters into the United States. 1932. 5¢.

No. 11. Some Unusual Markets for Fish and Shellfish. 1932. 5¢.

No. 3. Market for Fresh Oysters in 14 Cities of the United States. 1931. 10¢.

ECONOMIC CIRCULARS

No. 74. Application of Preservatives to Fishing Nets. 1931. 5¢.

No. 69. Salmon--an Economical and Valuable Food. 1929. 10¢.

DOCUMENTS

No. 1092. Pacific Salmon Fisheries. 1930. 65¢.

No. 1078. Utilization of Shrimp Waste. 1930. 10¢.

No. 1075. Net Preservative Treatments. 1930. 5¢.

No. 1065. Bibliography on Cod-liver Oil in Animal Feeding. 1929. 10¢.

No. 1059. Fishing Grounds of the Gulf of Maine. 1929. 25¢.

ADMINISTRATIVE REPORTS

No. 35. Progress in Biological Inquiries, 1938. 15¢.

No. 34. Propagation and Distribution of Food Fishes, Fiscal Year 1938. 10¢.

No. 32. Fishery Industries of the United States, 1937. 25¢.

No. 31. Alaska Fishery and Fur-seal Industries in 1937. 15¢.

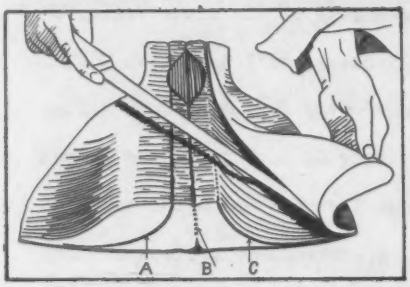
ORDERS FOR THE ABOVE-LISTED PUBLICATIONS SHOULD BE FORWARDED DIRECT TO THE SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, D. C., AND NOT TO THE BUREAU OF FISHERIES

MARKETING OF SHAD ON THE ATLANTIC COAST

INVESTIGATIONAL REPORT NO. 38

The season for shad has already started in the South Atlantic States. They will be at their peak of abundance in more northern States shortly. Consequently, the Bureau of Fisheries calls to your attention the publication entitled "Marketing of Shad on the Atlantic Coast", by Fred F. Johnson of the Bureau's staff.

The report includes the findings of a consumer survey covering eight cities from Washington, D. C., to Charleston, S. C. This survey dealt not only with shad but fish in general and brought out the following facts, among others, concerning dietary habits of the families surveyed:



Boning shad operation No. 1

1. The average family serves an average of 51 seafood meals at home annually.

2. The average family eats 6 seafood meals at public eating houses each year.

3. The average 2-person family purchases 1.7 pounds of dressed seafood per meal; a 3-person family, 2.2 pounds; a 4-person family, 2.4 pounds; and a 5-person family, 2.8 pounds.

4. Nearly 50 percent of the 2-person families surveyed in Washington, D. C., and Richmond and Newport News, Va., purchase one pound of dressed seafood or less per meal.

5. Nearly 38 percent of the 3-person families surveyed in the same cities purchase one and one-half pounds of dressed seafood or less per meal.

The small size of the average purchases of fish by small families is most significant in view of the fact that 44 percent of this country's families consist of those of two and three persons.


Boning shad operation No. 2

In addition to discussions of the shad fishery and trade in shad products, the report includes tested recipes for preparing shad and shad roe, and describes a method for boning shad, two illustrations of which appear above.

This report may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 10 cents, by requesting Fisheries Investigational Report No. 38.

NATURAL HISTORY AND METHOD OF CONTROLLING THE STARFISH

BULLETIN NO. 31

Direct damages by starfish, combined with the expense of protecting oyster beds from the depredations of this natural enemy, cost oyster growers of the State of Connecticut alone half a million dollars annually, according to a Bureau of Fisheries survey of the distribution of starfish and their effect on the oyster industry of Long Island Sound.

In its Bulletin No. 31, "Natural History and Method of Controlling the Starfish," by Paul S. Galtsoff and Victor L. Loosanoff, the Bureau provides the oyster industry with definite information on the areas of starfish concentration in the Sound and discusses the various methods of starfish control. Of particular interest, because of its demonstrated effectiveness and harmlessness to oysters, is the use of quicklime, which has been tested recently by the Bureau. Effective application of control measures, the Bureau's investigators conclude, depends upon organized efforts of individual oystermen and State conservation departments to clean out the centers of propagation from which starfish are continually spreading to cultivated bottoms. Control measures should be applied during the spring months, before the starfish have begun to appear.

The 57-page report may be obtained for twenty cents from the Superintendent of Documents, Government Printing Office, Washington, D. C., by requesting Bureau of Fisheries Bulletin No. 31.